



# FREIGHT MOBILITY



# STRATEGIC ACTION PLAN

*November 2002*



# City of Seattle

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Gregory J. Nickels, Mayor

**Seattle Department of Transportation**

Grace Crunican, Director

I am pleased to present the City of Seattle's first Freight Mobility Strategic Action Plan.

This plan is the final product of an initiative launched during Mayor Nickels' first 100 days in office. The draft plan generated during that time has since been circulated to key constituents for public comment. This implementation plan was developed with input from a variety of City staff and representatives of the freight and industrial communities. It will serve as a guide for the Seattle Department of Transportation's freight mobility activities, with both near and long-range goals and action items. This tool can help provide both private and public stakeholders with a means for future accountability because it guides our efforts to maintain and improve our transportation infrastructure.

The plan is divided into four key areas: *Truck Access*, *Rail Access*, *Freight Access to Manufacturing and Industrial Areas*, and *Retail Goods and Delivery*. Within each area, specific actions and assigned completion dates have been identified.

Seattle's roadways serve as a network connecting materials and supplies from Seattle's industrial and manufacturing areas to regional, state and international customers and as a critical conduit for delivering produce such as apples from farms in eastern Washington to overseas ports and destinations. Maintaining and improving freight mobility within Seattle will continue to be a fundamental element of sustaining our local, regional, and statewide economy.

We will continue to work with the freight and industrial communities to improve our existing transportation system and maintain a balance that moves goods, freight and people as safely and efficiently as possible. For further information on the Action Plan and the City's freight mobility program, please contact Ron Borowski, at (206) 684-8370 or at [ron.borowski@seattle.gov](mailto:ron.borowski@seattle.gov).

Sincerely,

A handwritten signature in dark ink, reading "Grace Crunican".

Grace Crunican

Director

Seattle Department of Transportation

# Putting Local Freight Mobility Into a Global Context

Safe and efficient movement of freight and goods is critical to Seattle's economic stability and development, and to every sector of the state's economy. Washington is the most trade-dependent state in the country: one in three jobs are related to international trade.

The Puget Sound Regional Council reports that together the Central Puget Sound's Seattle and Tacoma ports form one of the top three containerized cargo load centers in the Western Hemisphere. Our region is a major North American gateway for trade with Pacific Rim countries and trade to Alaska. We are also home to multiple marine-related businesses, including the Pacific Northwest's premier fishing fleet. However, our region is not just a pass-through stop—65 percent of truck trips originating in this region are destined to stay in western Washington.

Freight mobility issues are particularly important for Seattle's two designated manufacturing and industrial centers—the Duwamish area and the Ballard/Interbay/Northend area. These two centers are expected to accommodate at least 10 percent of Seattle's new employment over the next 20 years—nearly 15,000 new jobs. Direct and reliable connections to water, rail, airport and truck facilities are crucial to ensuring our region's economic growth and well-being.

The Seattle Department of Transportation (SDOT) operates and maintains Seattle's local street system. In recognition of the importance of freight mobility, SDOT is establishing a Freight Mobility Coordinator position to better integrate freight improvement practices within ongoing SDOT plans, programs, projects and operating practices. This staff position will serve as the department point-of-contact with the freight community. SDOT will work closely with the freight community to exchange information and obtain input. In recognition of the importance of reliable connections to the state and regional routes, SDOT will also advocate with other transportation providers for the inclusion of freight mobility considerations in the design and operation of their facilities to enhance the movement of freight and goods through the transportation system. Better integrating these responsibilities within SDOT will help provide for a more coordinated response to the freight community's needs.

## ***The Challenges of Funding***

Long-term freight mobility solutions such as railroad/street grade separations are expensive and often involve complex funding partnerships with public and private parties including the Federal government, State, Port of Seattle, County and Burlington Northern Santa Fe and Union Pacific Railroads. These challenges are currently exacerbated by struggling national and regional economies. In an environment of significant local, regional, and state budget reductions, finding funding for the megaprojects that would provide the greatest relief is a challenge. SDOT will continue to participate in regional and state forums to elevate support and advocate timely funding for local freight mobility needs.

Despite such uncertainty, SDOT has been able to identify a number of actions that can be accomplished either within existing resources or at a relatively low cost. It is important that SDOT lose neither the vision of Seattle's long-term infrastructure needs nor the urgency to make near-term progress on efforts to more efficiently move freight and goods through our transportation system.

## TRUCK ACCESS

All of Seattle's businesses and residents rely on freight shipped via trucks in one way or another. While light trucks will continue to play an important role, the freight industry is generally moving towards the use of larger trucks to haul materials to and from construction sites, support manufacturing and industrial businesses, connect ships and railroads, and make regional, interstate, and international trips. Moving these larger trucks on city streets can be a challenge.

While all arterial streets within Seattle are considered truck streets, the Seattle Comprehensive Plan has designated a network of *Major Truck Streets* intended to serve as primary routes throughout the City. (See map at end of this plan).

The following strategies outline ways the City can improve truck access in Seattle to provide for more efficient mobility in the transport of goods on our city's street system.

### REVIEW SITE-SPECIFIC OBSTACLES TO TRUCK MOVEMENTS ON MAJOR TRUCK STREETS

The City's *Major Truck Streets* are made up of existing arterials; very few of these streets were designed or constructed to accommodate trucks of the size and weight that are commonly in use today. As arterials are reconstructed, changes are made to accommodate larger vehicles, but many problem locations will not be reconstructed for many years. Similarly, conflicts between trucks and other transportation modes (trains, cars, pedestrians, and bicyclists) can create safety concerns and cause expensive delays. Minimizing such conflicts makes all trips safer and more efficient as well as supports economic development.

SDOT is proposing a *spot improvement program* to address restrictive conditions that may exist on major freight corridors to enhance the ability of trucks to operate on the existing streets. Improvements that support truck movement include increasing curb radii on critical corners, removing on-street parking in key locations, relocating utility poles that are too close to the curb, installing signing (truck, street name designation and directional signing), providing truck queue lanes/holding lanes at major terminal access points, and revising intersection signalization to assist truck movements that now typically require a long wait for an adequate traffic gap.

#### ACTION 1

SDOT will work with the Manufacturing and Industrial Council (MIC), the Ballard/Interbay/North Manufacturing



*A spot improvement program will address restrictive conditions that exist on major corridors to improve truck movement.*

Industrial Council (BINMIC), and other trucking and shipping groups to identify location-specific problem areas. Problem locations in the MIC area have been identified and are being updated to include the BINMIC area input. The combined inventory will be completed by November 2002.

#### ACTION 2

In conjunction with the freight community, SDOT will prepare a set of recommended solutions, order-of-magnitude cost estimates, and identify potential funding sources for spot improvements. These locations will be evaluated for potential improvements, consistent with ongoing traffic management practices and the *Street Improvement Manual* design standards. The SDOT Freight Coordinator will facilitate this work plan for the balance of 2002.

#### ACTION 3

SDOT will look for early opportunities to begin implementation of any proposed solutions that fall within existing spot improvement funding by the 4<sup>th</sup> quarter of 2002.

#### ACTION 4

SDOT will continue to seek funding for freight mobility projects. SDOT applied for a State FAST Corridor Partnership grant for funding to implement a multi-year mobility improvement program that would address many of the identified spot improvements over a six-year period. This application was not successful in obtaining funds in the 2003 funding cycle. The department applied for a similar grant from the *State Freight Mobility Strategic Investment Board* in September 2002. SDOT will continue to pursue this effort in future grant cycles.



## REVIEW DESIGN STANDARDS TO ENSURE THAT ENHANCEMENTS TO THE CITY'S ARTERIAL STREETS CAN ACCOMMODATE TRUCKS AND OVERSIZED VEHICLES

As is characteristic of the historic development of Seattle, many City streets were not designed to current standards. Aging infrastructure has also taken its toll on street conditions. Implementing street changes for freight will be an incremental process of improving the physical environment as opportunities and funding permit. In particular, trucking operators are concerned that the City's existing street design standards are not adequate for the larger trucks more prevalent today. The City will continue to review the current standards and modify them as appropriate to ensure that when arterials—especially *Major Truck Streets*—are redesigned and rebuilt, they are better able to accommodate truck movements, in coordination with other street use needs.

The City of Seattle has an existing set of oversized routes to accommodate wider and taller shipments (examples are East Marginal Way South, Alaskan Way, Elliott Avenue West, 15th Avenue West/NW, and the Lower South Spokane Street roadways). While all arterial streets, within their geometric limitations, can be used by oversized vehicles on a permit basis, there is a need to connect and preserve the primary routes connecting Seattle's two designated industrial areas.

### ACTION 1

In June 2000, the City published an update of *Seattle's Standard Plans and Specifications*. This document is reviewed biannually. The next update of these standards is currently under review and will be published in December 2002.

### ACTION 2

SDOT has begun the process of updating the *Street Improvement Manual*. The new document is scheduled to be published in January 2004. Over the course of the next 18 months, staff will continue to work with freight stakeholders to obtain input on technical design standards and other supporting material for incorporation in the final document.

### ACTION 3

SDOT will work with the MIC and BINMIC to identify both regularly and currently used and any potential new "Oversized Routes." Such routes should be identified by December 2002.

### ACTION 4

SDOT will work to identify a design standard within the *Street Improvement Manual* to accommodate oversized vehicles. For example, it would suggest something akin to the typical 20' high x 20' wide envelope to be provided on all City Major Truck Streets, as funding and site specific conditions permit.

## IMPROVE PAVEMENT CONDITIONS ON TRUCK ACCESS ROUTES

Truck access routes tend to deteriorate more quickly than other streets because they carry heavier loads and higher volumes. *Major Truck Street* status, as identified in the *Seattle Comprehensive Plan*, should be one of the criteria for determining paving priorities.

### ACTION 1

SDOT will work with freight stakeholders to review and update arterial routes critical to industrial access. This should be completed by December 31, 2002.

### ACTION 2

SDOT will use the condition of critical routes and the designated Major Truck Streets on an on-going basis as a important criterion, in coordination with other decision criteria, for determining priorities for street rehabilitation and reconstruction.



*Major Truck Street status, as identified in the Seattle Comprehensive Plan, should be one of the criteria for determining SDOT paving priorities.*

## GRADE-SEPARATE KEY TRUCK STREETS AT HEAVILY USED RAILROAD CROSSINGS

Rail crossings on major truck routes are difficult obstacles for truck movement, especially in the South Downtown area. Grade separations are the most effective way to

eliminate these conflicts and implementing a program of grade separations is one of the City's highest freight mobility priorities. These overcrossings or undercrossings are extremely expensive and are justifiable only where there is significant traffic on both the truck route and the rail line.

Grade separations could significantly reduce the typical 8-11 minute delays encountered at current at-grade rail/street crossings of the rail mainline tracks. There are approximately 70 train movements per day across the east/west arterial streets in the Duwamish area. The City has developed a list of potential grade separation projects based on the *Greater Duwamish Manufacturing and Industrial Center Plan* and the *Access Duwamish Freight Mobility Implementation Plan*. The City is actively participating in the State's FAST Corridor Program and the regional Freight Mobility Roundtable, and has coordinated with the state Freight Mobility Strategic Investment Board to advocate for increased state and federal funding for these capital-intensive projects. Ongoing communications are underway with federal, state, and regional officials to obtain support for project implementation. State and federal funding processes assign greater priority to project applications which offer private funding participation. SDOT will encourage private funding partnerships where projects benefit the freight community.

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#### ACTION

Continue the development of grade separation projects and seek funding partners for implementation; lobby the State Legislature and United States Congress to obtain state and federal funding. The following projects are currently in various phases of planning and implementation:

- **Galer Street Flyover** – Structure was completed in 2001 to carry traffic from Terminal 90/91 and



*The Galer Street Flyover, completed in 2001, carries traffic from Terminal 90/91 and adjacent businesses over the mainline BNSF tracks.*

adjacent businesses over the BNSF mainline tracks.

- **SR 519, Phase 1** – Under construction on S. Atlantic St.
- **SR 519, Phase 2** – Unfunded; construction could occur within 10 years on S. Royal Brougham Way
- **Lander Street Area Grade Separation** – City entering into detailed study; estimated project cost of \$24 million; unfunded; estimated project completion time is currently by 2009.
- **Spokane Street Widening** – City seeking final portion of State and Federal funding for construction (Phase 4); Phase 3 construction underway on lower portion of roadway; estimated total project cost of \$92 million, \$30 million still unfunded; full funding would put construction in the 2003 – 2005 timeframe.
- **East Marginal Way South** – Port proceeding with design; seeking construction funding through the State's FAST Corridor program.
- **Magnolia Bridge Replacement Project** – Currently funded for a Type Size and Location Study. A new bridge will provide opportunities for better connections to industrial area adjacent to Terminal 90/91.

### EXPLORE STRATEGIES FOR MINIMIZING CONFLICTS BETWEEN TRUCKS AND OTHER TRANSPORTATION MODES

There are a number of basic conflicts between heavy truck traffic and other motorized, non-motorized and pedestrian modes of transportation that the City continually needs to evaluate and address. Possible solutions might include identifying alternative routes, developing separate facilities, and clarifying priorities for specific locations.

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#### ACTION 1

SDOT's Freight Coordinator will work on an ongoing basis within the department to identify potential measures, such as spot improvements and design standard revisions, for minimizing conflicts between trucks and other transportation modes.

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#### ACTION 2

SDOT will prepare funding strategies to pursue identified techniques by January 1, 2003.

## RAIL ACCESS

Efficiently moving containerized cargo shipments is critical to maintaining a healthy, vital economy in the Puget Sound Region. Container freight movement is increasing, especially by rail, for destinations in the Midwest and beyond. Rail is an essential and efficient option for moving freight and goods and provides an alternative to trucks for many industrial and manufacturing businesses. The increasing use of shipping containers on rail is straining the throughput capacity of the region's railroads.

Beyond freight mobility, rail is also an increasingly attractive option for commuters, evidenced by the early success of Sound Transit's Sounder line between Tacoma and Seattle. Extension of service to Everett is expected within the next few years. All of this activity strains the operational efficiency of mainline rail/street crossings.

The following actions are designed to support the safe and efficient movement of freight and goods by rail.

### COORDINATE RAILROAD AND TRAFFIC CONTROLS TO MINIMIZE CONFLICTS

Some railroad crossing locations are adjacent to signalized arterial intersections and represent potential conflicts between modes. Improved signal interconnects (communications between control equipment) which coordinate rail and street traffic can reduce safety problems (stopping traffic before it reaches the rail crossing). Interactive traffic signs can provide information about waiting times and redirect roadway traffic from closed rail crossings.

Technology improvements will be applied on an ongoing basis to the City's inventory of traffic signals, signage, and other devices. Such Intelligent Transportation System (ITS) efforts can often be implemented on a quicker timeframe than more capital-intensive projects, providing interim freight mobility relief until the larger, longer-term projects come to fruition.

#### ACTION 1

As part of its ongoing Duwamish ITS Project, SDOT will implement the following ITS elements to reduce rail-related conflicts: traffic signal interconnection of the area's 80-plus signals and 40-plus modernized controllers; special traffic control strategies in response to changing conditions caused by trains moving through at-grade crossings and bridge raisings; and connections and coordination between railroad crossing signals and adjacent traffic signals.



*The increasing use of shipping containers on rail is straining the throughput capacity of the region's railroads.*

#### ACTION 2

SDOT will seek grant funding for ITS systems to detect train lengths and use variable message signs to alert drivers about possible delays at crossings.

#### ACTION 3

SDOT will pursue an agreement with Sound Transit and BNSF Railroad to install advance signal control (pre-signals with interconnects) at South Royal Brougham Way and South Holgate Street.

#### ACTION 4

SDOT will implement mitigation measures necessary to enable the closure of the Galer Street at-grade crossing by March 31, 2003.

### PRESERVE EXISTING RAIL CORRIDORS AND FREIGHT RAIL CAPACITY

The City's existing freight rail capacity faces challenges from the loss of rail lines, the conversion of rail-accessible land to non-industrial uses, and passenger rail expansions. It has always been City policy to encourage railroads to maintain rail service; however, the City is limited in what it can do to prevent major railroads from discontinuing service. Building from the example of its 1989 agreements with BNSF to preserve the Ballard industrial corridor and the formation of the Ballard Terminal Railroad, the City should determine the benefit of rail line preservation and then consider whether acquisition of other threatened corridors is warranted to preserve the opportunity for a short line operator to provide continued rail service.

The City should take a comprehensive approach to developing and evaluating strategies that preserve rail capacity for freight, including consideration of these strategies:

- Maintain existing rail access to active manufacturing and industrial sites.
- Support the short line railroad operators in their efforts to maintain rail service to customers in the Ballard Industrial District.
- Encourage private sector development of additional short-line railroads where feasible.
- Preserve existing rail corridors in public ownership rather than allowing threatened corridors to be abandoned.
- Encourage improvement of mainline tracks to maintain freight capacity while expanding regional passenger rail.

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**ACTION**

The SDOT Freight Coordinator will lead an interdepartmental City effort to develop a strategy for preserving existing freight rail capacity by March 31, 2003.

### **EVALUATE POTENTIAL CHANGES TO REGULATIONS OF RAIL OPERATIONS ACROSS CITY STREETS**

Balancing rail, truck, and passenger movement may require changes in the City's Traffic Code regulating rail activities across city streets (e.g., speed limits and switching across arterials). Recent legislation authorized an increase in rail speeds contingent on grade crossing improvements in conjunction with Sound Transit commuter rail track improvements.



*Rail operations serving manufacturing and industrial uses is a critical component of the City's transportation system.*

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**ACTION**

Revise the City of Seattle's Traffic Code to reflect the recent 2002 Supreme Court ruling regarding rail switching activities across city streets. This action will be coordinated with the Seattle City Attorney, with whom the completion date for this revision will be determined.



## FREIGHT ACCESS TO MANUFACTURING AND INDUSTRIAL AREAS

A healthy transportation infrastructure is essential to Seattle's manufacturing and industrial areas. Reliable, direct connections to water, rail, airport and truck facilities are important to an array of existing businesses, and our region's ability to attract new businesses. Due to the nature of these businesses, truck volumes and frequencies are higher here than in other areas of the city, and truck access is of paramount importance.

### PROTECT AND IMPROVE FREIGHT ACCESS TO MANUFACTURING AND INDUSTRIAL AREAS

The City needs to develop strategies that address the following themes:

- Preserve good ground transportation access to manufacturing and industrial sites served by freight carriers and their supportive facilities (rail and marine).
- Improve directional signage between manufacturing and industrial areas and the regional highway system.
- Improve and protect the utility of major truck streets to and from manufacturing and industrial areas. These include key streets such as 15<sup>th</sup> Avenue West, Elliott Avenue and Western Avenue, and the grade separation projects listed earlier in this Plan.
- Facilitate efficient movement of goods within the manufacturing and industrial areas.
- Retain access to local businesses within the plan development process for major capital projects in the industrial areas.
- Coordinate with the Port of Seattle facility planning efforts on the future construction and operation of a truck emphasis route along E Marginal Way S, as was identified in the Access Duwamish Freight Mobility Implementation Plan.
- Where safe and appropriate, allow loading and maneuvering of trucks on non-arterial access streets in industrial areas.
- Improve pavement conditions on industrial arterial access streets within manufacturing and industrial areas.

#### ACTION 1

The SDOT Freight Coordinator will confer with the freight community to outline strategies that address these and other issues critical to improving and preserving access to manufacturing and industrial areas.

#### ACTION 2

SDOT will coordinate with the industrial area freight and business community to identify and communicate transportation project schedules and construction-related traffic changes via traffic alerts and other techniques.



*SDOT will continue to improve directional signage between manufacturing and industrial areas and the regional highway system.*

## RETAIL GOODS AND DELIVERY

The everyday delivery of goods and services purchased by the general public, businesses, and the government is critical to our economy's success. The City needs to evaluate its role in supporting and managing these activities, aiming both to increase their efficiency and to minimize their negative impacts.

### DEVELOP AND IMPLEMENT GOODS DELIVERY STRATEGIES

The City should explore strategies that address issues of goods delivery and managing operational impacts on adjacent uses.

To facilitate the efficient delivery of goods to and from businesses, the City should consider the following:

- Allow after-hour truck access on certain streets.
- Balance the needs for loading zones with on-street parking and other curb use needs.
- Ensure workable truck access and adequate loading berths in the design of new buildings in conjunction with DCLU development review practices.
- Retain alleys and ensure they work efficiently for goods delivery.
- Provide suitable truck layover areas for use during those periods of time when trucks are restricted from entering certain urban centers.
- Ensure that loading zones are reserved for freight loading and unloading as intended with appropriate levels of enforcement .

To better manage the negative impacts of goods delivery in residential areas, the City should consider the following:

- Support use of smaller trucks within commercial districts.
- Restrict hours of operation for large trucks in these areas.

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#### ACTION

SDOT will continue to coordinate with the freight community and appropriate City staff to outline strategies that help facilitate more efficient goods delivery, and better access on City streets.



*The delivery of goods and services purchased by the general public, businesses, and the government is critical to our Seattle's economic success.*

# Major Truck Streets

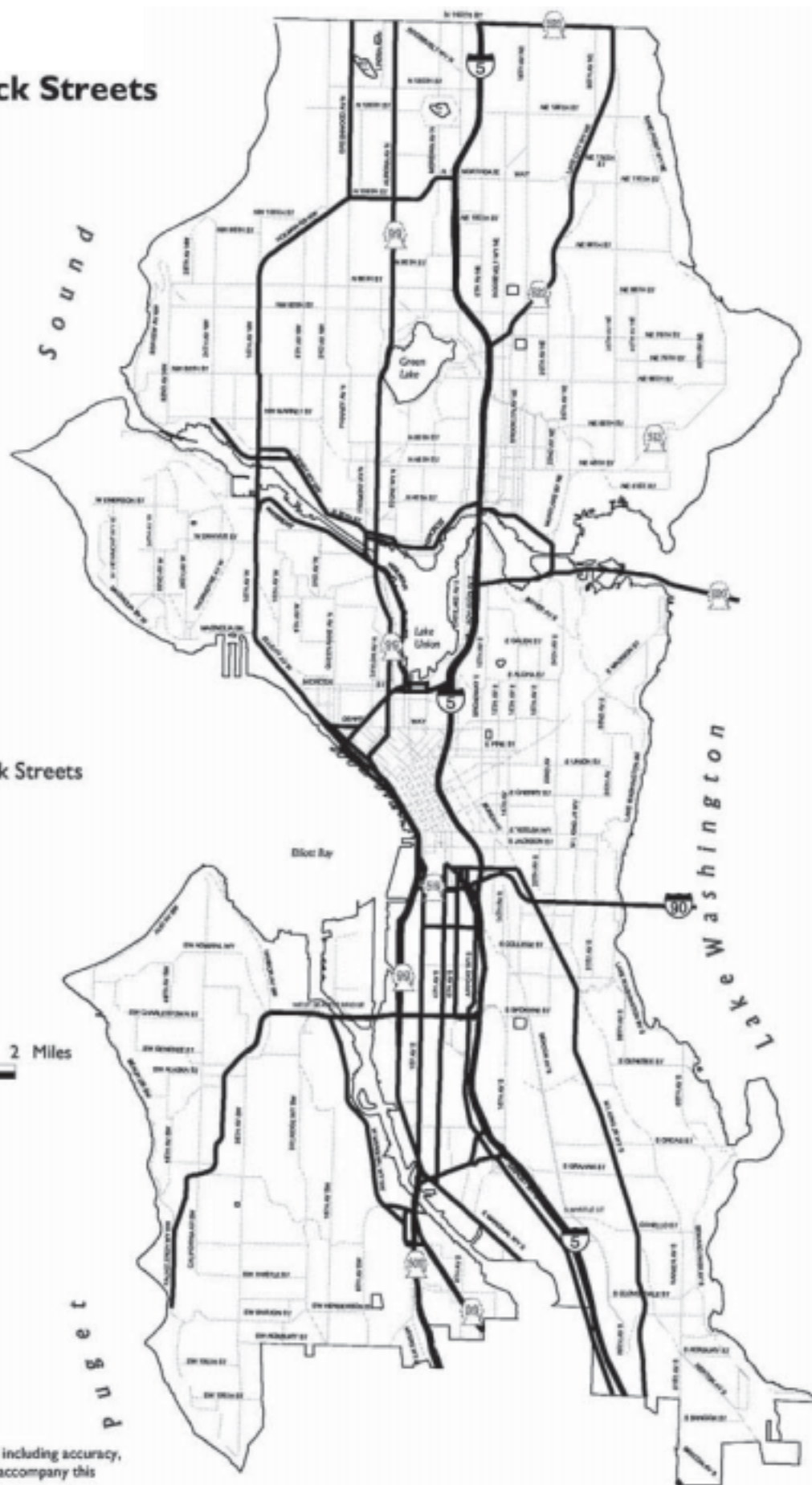
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Source: Seattle's Comprehensive Plan. January 2001.

